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ABSTRACT

A study assessed the effect of American/Western culture on English-speaking Japanese bilinguals as reflected in differences in the connotative meanings of certain kinds of words. Differences in culturally determined meanings were examined in translation-equivalent concrete concepts, abstract words, and personality attributes, as measured on a semantic differential scale, among 35 Japanese college students in the United States. Results indicate that: (1) equivalent concepts in Japanese and American English differ in affective meaning for the same bilingual subjects, and (2) such shifts in meaning are reflected differentially by individual factors in the three concept domains. In addition, in the personality-attribute domain, the shifts in meaning for four out of eight words were in directions contrary to known cultural differences. In general, the results support the proposed existence of separately coded meaning systems and provide evidence for separately maintained verbally mediated cognitive systems. The maintenance of two meaning systems facilitates coping with and adapting to the conflicting values and attitudes of two different cultures. (MSE)

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COGNITIVE CORRELATES OF CULTURALLY DISSIMILAR WORD MEANINGS IN THE TWO LANGUAGES OF THE BILINGUAL

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INTRODUCTION

Equivalent words in various languages often do not mean the same thing, are not seeking to communicate the same meanings and at times may, in fact, be conceptualizing very different phenomena or experience (Guthrie, 1971; Kondo, 1975; Murase & Johnson, 1974; Sommers, 1968). These semantic relations between culture and language have implications spanning all aspects of psychology. Bilinguals, who are also bicultural, serve as ideal control subjects to investigate the phenomenon of culturally-conditioned connotative meaning of equivalent terms in the two coding systems within the same individual.

Culture and Meaning

Insofar as culture can be apprehended, it imparts meaning to life and rendering that which is knowable comprehensible. This "subjective culture," a cultural group's characteristic way of perceiving its social environment including attitudes, norms, values, and expectations (Triandis et al., 1972), encompasses acquired behavioral dispositions reflecting social structural determinants.

Language and Meaning

The close links between language and cognition, between perception and thinking, have been postulated earlier by Benjamin Whorf (1956) and Edward Sapir (1966). Given that culture significantly influences the phenomenological experience of man and given the relative permanence of both culture and its associated language, it is reasonable to assume that the cultural values, attitudes, beliefs, and other premises are imprinted in the meaning of those verbal units.

The available evidence strongly suggests that the affective meaning of certain translation-equivalent concepts vary from one cultural context to another and that such differences are measurably manifested in the semantic differential scales (Kumata & Schramm, 1956; Maclay & Ware, 1961; Osgood et al., 1975; Triandis & Osgood, 1958).

Problem

The question is: How do human beings function cognitively with two symbolic systems (languages) whose signs (word concepts) have differential, at times, incompatible culturally conditioned internal referents (meanings)?

This study assessed the effect of the American/Western culture on the English-speaking Japanese bilinguals as indexed by the variations in the bicultural semantic differential patterns of translation-equivalent concrete concepts (e.g., SNAKE), abstract words (e.g., HAPPINESS), and personality attributes (e.g., DEPENDENT PERSON).

It was hypothesized that:

(1) within each domain, the translation-equivalent terms in the two languages will have significantly different loci within the sementic space as defined by the orthogonal Evaluation (E), Potentcy (P), and Activity (A) axes;

(2) such differences will be greater for the abstract than the concrete categories and larger for the personality-attribute than for abstract categories; and

(3) the relative changes in the mean E, P, and A factor scores will vary differentially within each domain and for each factor across three domains.

METHOD

Subjects

Thirty-five male (66%) and female (34%) native Japanese attending American colleges and universities for a minimum of one year served as subjects. Their mean length of enrollment in English-speaking schools was 3.4 years, and their mean length of residence in the U.S. for all subjects was 3.9 years.

Material

Scales. The best metric for this study is the semantic differential (SD) obtained from bicultural factor analysis (Osgood et al., 1975) of the pooled data matrix generated by Japanese and American subjects in their native tongue.

Stimulus Words. The "concreteness" or "abstractness" of word concepts were defined largely on the basis of Pavio's (1971) criterion. A final set of 30 stimulus words, ten for each domain in American English and Japanese, was selected on the basis of their ratings with consideration for potential psychological significance and/or affective contrast between the two cultures (Appendix A).

Procedure

Half of the subjects were randomly assigned to American-English (AE) first and the remaining half to Japanese (JP). Following an interposed period of several weeks, the entire procedure was repeated in the other language. Aggregate scores obtained by the 7-point Likert-type scales are given in Appendix B.

Analysis of Data

The ratings were converted into E, P, and A factor scores for each individual. A change score for each factor was obtained by the formula: Δ=JP - AE. The linear distance between pairs of translation-equivalent concepts within the Euclidean space is the D statistic (Osgood et al., 1957). Hotelling's T^2 value was calculated as the multivariate-test statistic (Morrison, 1976). A one-way analysis of variance for repeated measures was applied to test for equality of mean Ds between domains. Six separate one-way repeated-measures ANOVA were performed following an over-all test using a two-way repeated measures ANOVA to examine main effects and Domain x Factor interaction effects.

RESULTS

Within each domain, the meaning of the ten translation-equivalent word concepts, taken simultaneously, was significantly different ($p > .01$) in the two languages of the same bilingual individual (Table 1).

For the second hypothesis, based on D scores, the repeated-measures analysis of variance procedure obtained $p = .056$. Only the contrast between domains with the smallest and the largest mean D scores, Concrete (Mean D = 1.55) vs. Personality-Attribute (Mean D = 1.74), respectively, reached significance at the .01 level (Table 1).

Thirdly, analysis of variance for a two-way repeated-measures was applied to the domain x factor (3 x 3) factorial design (Table 2). There was a significant Domain effect ($p = .03$), and Factor effect ($p = .05$). But the extremely significant Domain x Factor interaction effect ($p = .001$) rendered any findings on main effects tentative (Figure 1).

Table 1

Domain D Scores

Concepts	Mean	Standard Deviation
Concrete		
BABY	1.64	0.88
BREAD	1.62	1.00
FIRE	1.80	1.10
FLOWER	1.44	0.60
HAND	1.41	0.67
INSECT	1.36	0.79
RAIN	1.58	0.96
SNAKE	1.59	0.77
SNOW	1.87	1.00
STONE	1.23	0.67
MEAN	1.55	0.41
Abstract		
CONFIDENCE	1.74	0.95
FEMININITY	1.65	1.09
FREEDOM	1.78	0.92
FRIENDSHIP	1.35	0.73
GOD	1.51	0.68
HAPPINESS	1.44	0.70
LOVE	1.64	1.05
LUCK	2.03	0.90
PEACE	1.33	0.64
TRUST	1.48	0.91
MEAN	1.60	0.39
Personality Attribute		
ASSERTIVE P.	2.14	1.16
CONFORMING P.	2.08	1.12
COOPERATIVE P.	1.54	1.25
DEPENDENT P.	1.66	1.27
DUTIFUL P.	2.07	1.40
INSANE P.	1.50	0.80
LOYAL P.	1.79	0.84
NEUROTIC P.	1.75	0.96
OBEDIENT P.	1.60	0.85
SHY P.	1.30	0.73
MEAN	1.74	0.50

Table 2

Individual Factor Change Scores

Concepts	ΔE	ΔP	ΔA
Concrete			
BABY	-0.52*	0.16	0.19
BREAD	-0.22	-0.97*	-0.31
FIRE	0.64*	-0.46*	0.28
FLOWER	-0.01	-0.32*	-0.57*
HAND	-0.01	-0.19	-0.28*
INSECT	0.18	0.01	-0.29*
RAIN	0.12	-0.61	-0.70*
SNAKE	-0.14	-0.75*	-0.20
SNOW	-0.25*	-1.22*	-0.74*
STONE	0.41*	0.16	-0.15
MEAN	0.02	-0.42	-0.28
Abstract			
CONFIDENCE	-0.19	0.26	0.49*
FEMININITY	0.46*	0.15	-0.30
FREEDOM	0.01	-0.90*	-0.01
FRIENDSHIP	0.12	-0.03	-0.10
GOD	-0.38*	-0.45*	0.02
HAPPINESS	-0.25*	-0.25	-0.46*
LOVE	-0.50*	-0.35	-0.36*
LUCK	-1.06*	0.22	-0.25
PEACE	-0.24	0.37*	-0.03
TRUST	0.20	-0.21	0.06
MEAN	-0.18	-0.12	-0.09
Personality-Attribute			
ASSERTIVE P.	0.89*	0.67*	0.42*
CONFORMING P.	-0.67*	-0.76*	0.07
COOPERATIVE P.	0.27	0.29	0.00
DEPENDENT P.	-0.78*	-0.59*	-0.28
DUTIFUL P.	0.86*	1.06*	-0.04
INSANE P.	0.01	-0.65*	-0.23
LOYAL P.	0.31	0.15	-0.39*
NEUROTIC P.	-0.20	-0.30	-0.57*
OBEDIENT P.	0.07	0.11	-0.25
SHY P.	-0.33*	-0.18	-0.63*
MEAN	0.04	-0.02	-0.19

*Significant at .05 or beyond.

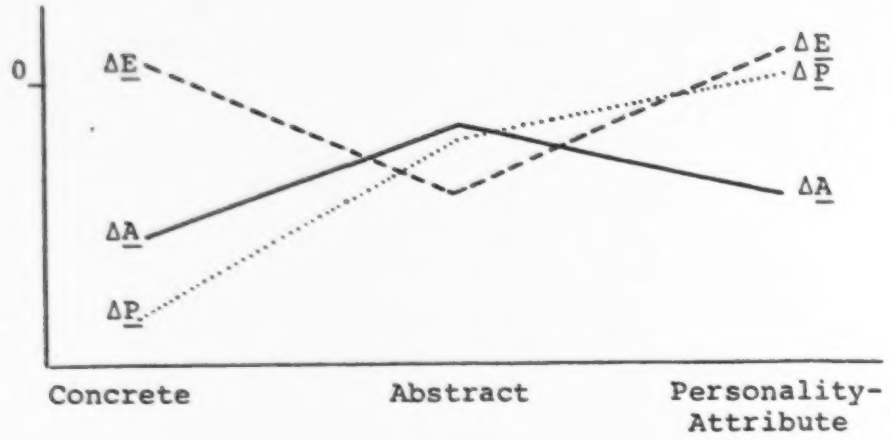

Figure 1. Mean Factor Change Scores

DISCUSSION

The results clearly demonstrated significant differences in the connotative meaning between translation-equivalent concept domains, in Japanese and American-English, for the same bilingual individuals. Furthermore, the relative magnitude of mean D scores supports the prediction that such concrete concepts as HAND, INSECT, STONE, etc., thought to be relatively less culture bound and more universal in their connotations, have less meaning differences between Japanese and English than the more abstract concepts (e.g., HAPPINESS, FREEDOM) or attributes of people (e.g., SHY PERSON, DUTIFUL PERSON) which had the largest mean D score.

In terms of the experimental hypotheses, the results lead to the conclusion that: (1) equivalent concepts in Japanese and American-English languages differ in affective meaning for the same bilingual subjects, and (2) such shifts in meaning were reflected differentially by individual factors—e.g., more along the Evaluative in the abstract domain, Activity and Potency in the concrete domain, and Activity in the personality-attribute domain. However, in the personality-attribute domain, the shifts in meaning of four out of eight words were in directions contrary to known cultural differences. They are conspicuous in their decided departure from such core Japanese, indeed most Oriental, cultural emphasis on conformism, regard for conventional behavior, compliance to rules, compromise, and reserve (Atkeson, 1970; Kitano, 1976; Murase & Johnson, 1974).

Personality-Attribute Domain.

Several explanations can be offered to perhaps parsimoniously account for these contradictions in their ratings in Japanese for ASSERTIVE, CONFORMING, DEPENDENT, and SHY PERSONS. These visa students must possess unusually greater sense of self-reliance and independence, especially by Japanese standards, as compared to their native counterparts. More importantly, in recent years, there has been an increasingly widening gap between the way younger and older generations live, think, and feel (Minami, 1971; Reischauer, 1977). Such over-identification with Western values of conduct in their own native language may be an attempt at lessening the conflict caused by their innate Japanese values, since such dissonance is apt to be more acutely and intensely sensed within their "Japanese" psyche. With the exception of the above four concepts, for the remaining personality-attribute concepts (viz., DUTIFUL PERSON, LOYAL PERSON, INSANE PERSON and NEUROTIC PERSONAL), the directionality of significant factor changes has been in accord with expectation.

Concrete Domain. The pattern found in the ratings for this domain in the two languages indicated that their affective responses in Japanese were generally consistent with Japanese cultural values and attitudes.

Abstract Domain. Eight concepts within this domain had one or score changes that were statistically significant. They included: CONFIDENCE, FEMININITY, FREEDOM, GOD, HAPPINESS, LOVE, LUCK, and PEACE.

CONCLUSION

The results of this research further support the proposed existence of separately coded meaning systems (Ervin, 1964; Kolers, 1968) and provided additional evidence for separately maintained verbally-mediated cognitive systems. They can evolve, through the process of biculturation, for their adaptive value in coping with the stresses of conflicting and/or changing subjective cultures. The tasks confronting foreign students in the United States include adjustment difficulties in relation to communication, learning the ways of academic life, maintaining self-esteem, gaining acceptance, and making friends and balancing both Japanese and American group memberships and loyalties. From a psychological point of view, these conflicts and strains implicit in relinquishing a traditional role in a new country would appear to pose a threat for loss of identity. The maintenance of two meaning systems, each appropriate to the demands of the two external domains, within the bilingual individuals' internal cognitive domain, facilitates coping with and adapting to the conflicting values and attitudes. It aids in one's effort at striving for bicultural cognitive competence.

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Appendix A

CONCEPT DOMAINS

Concrete	Abstract	Personality Attribute
Bread	Luck	Loyal Person
Insect	Trust	Obedient Person
Stone	Peace	Dependent Person
Snow	Friendship	Conforming Person
Baby	Confidence	Insane Person
Flower	Love	Shy Person
Snake	Freedom	Neurotic Person
Rain	Femininity	Assertive Person
Hand	God	Cooperative Person
Fire	Happiness	Dutiful Person

Appendix B

Ratings of Concreteness and Abstractness by
American and Japanese Subjects

Domain/Concepts	American	Japanese
Concrete		
BABY	6.5	5.9
BREAD	6.9	6.6
FIRE	6.8	5.6
FLOWER	6.6	6.4
HAND	6.8	6.0
INSECT	6.9	6.3
RAIN	6.7	6.1
SNAKE	7.0	6.1
SNOW	6.7	6.2
STONE	6.9	5.7
MEAN	6.8	6.1
STDD. DEV.	0.4	1.2
Abstract		
CONFIDENCE	2.5	2.0
FEMININITY	2.5	2.5
FREEDOM	1.7	2.0
FRIENDSHIP	1.9	2.6
GOD	1.1	2.2
HAPPINESS	1.7	2.8
LOVE	1.3	2.4
LUCK	1.2	1.7
PEACE	2.0	2.5
TRUST	1.4	2.1
MEAN	1.7	2.3
STDD. DEV.	1.0	1.5
Personality Attribute		
ASSERTIVE P.	3.1	3.7
CONFORMING P.	3.0	3.7
COOPERATIVE P.	3.5	3.6
DEPENDENT P.	2.9	3.4
DUTIFUL P.	3.0	3.6
INSANE P.	2.2	3.0
LOYAL P.	2.8	2.9
NEUROTIC P.	2.6	4.3
OBEDIENT P.	3.0	3.5
SHY P.	3.2	3.9
MEAN	2.9	3.6
STDD DEV.	1.3	1.4